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Via Electronic Mail (kkratzke@waterboards.ca.gov)

Mr. Kevin Kratzke
Central Valley Regional Water Quality Control Board
415 Knollcrest Drive, Suite 100
Redding, CA 96002

Re: Tentative Order No. R5-2007-XXXX, NPDES No. CA0084859
Waste Discharge Requirements for the I'SOT Inc. Geothermal Heating System, Modoc County

Dear Mr. Kratzke:

On behalf of the Environmental Law Foundation, a non-profit, public interest organization dedicated to protecting water quality throughout California, I would like to thank you for the opportunity to submit comments on Tentative Order No. R5-2007-XXXX, NPDES No. CA0084859, authorizing the discharge of waste by I'SOT Inc., Geothermal Heating System, Modoc County, to the Pit River. It is our hope that this discharge will not degrade the Pit River–a requirement under California's antidegradation policy, which requires that baseline water quality be maintained. (*See* State Water Resources Control Board Resolution 68-16 (Oct. 24, 1968); 40 C.F.R. § 131.12.) As discussed further below, however, we believe that the Tentative Order does not comply with that policy, nor does the Order comply with the Clean Water Act's prohibitions against backsliding. Accordingly, we ask the Regional Board to revise the Tentative Order so as to ensure that no degradation will occur as a result of this discharge.

A. The Tentative Order Improperly Removes a Preexisting Effluent Limitation for Temperature

The Tentative Order authorizes the discharge of geothermal effluent into a temperature impaired waterbody without any effluent limitation or pursuant to any TMDL. This is patently inconsistent with the state's antidegradation policy, which incorporates the federal requirements for such a policy as set out at 40 C.F.R. § 131.12. Under those requirements, "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 C.F.R. § 131.12(a)(1). Accordingly, that requirement "prohibits any action which would lower water quality below that necessary to maintain and protect existing uses." (Region 9, U.S. EPA, *Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12* (June 3, 1987), p. 2 [hereafter "EPA Guidance"].) Where "water quality is lower than necessary to support these uses, the requirements in Section 303(d) of the [Clean Water] Act, 40 CFR 131.10 and other pertinent regulations *must be satisfied*." (*Id*. (emphasis added)) After all,

any increase in loading of a pollutant to a waterbody that is impaired because of that pollutant would presumably degrade water quality in violation of the state's antidegradation policy.

Here, the Pit River has been listed on the state's impaired water body list for temperature. (*See* 2006 CWA Section 303(d) List of Water Quality Limited Segments.) As such, water quality in the Pit is already lower than necessary to support designated uses. The Pit River, therefore, is subject to Tier I protection with regard to temperature. (William R. Attwater, Chief Counsel State Water Resources Control Board, mem. to Regional Board Executive Officers, Federal Antidegradation Policy (Oct. 7, 1987), p. 11 ("the requirement that existing instream uses be protected is not satisfied if existing instream beneficial uses will be impaired, even for a portion of a water body"); *see also In re Environmental Health Coalition*, SWRCB Order No. 91-10 (Sept. 26, 1991), p. 10 (antidegradation policy should be applied on a pollutant-by-pollutant basis).) Accordingly, no further degrading discharges can be allowed, particularly absent a wasteload allocation adopted pursuant to a TMDL.

Yet despite this, the Tentative Order not only fails to prohibit the degrading discharge, it actually *removes* the existing effluent limitation for temperature. This is entirely unlawful, particularly under the present circumstances.[1] (Region 9, U.S. EPA, *Draft Guidance for Permitting Discharges into Impaired Waterbodies in Absence of a TMDL* (May 9, 2000), p. 10 ("Any limits (or the lack of limits) which allow water quality to be further degraded [in an impaired waterbody] is prohibited by the CWA.").)

But the removal of the temperature effluent limit is not only inconsistent with the state's antidegradation policy, it is also inconsistent with the Clean Water Act's antibacksliding provisions, which prohibit relaxing prior effluent limitations in NPDES permits except in some narrowly tailored situations. "Consistency with other permits" and "compliance with effluent limitations," however, are not any of those situations.[2] (*Compare*, Tentative Order, pp. F-25 to F-26 ("Because the receiving water temperature limitation has always been met, and to establish consistency among the three Permits, the 80° F effluent limitation for temperature is not included in this Permit."), *with* 33 U.S.C. § 1342(o)(2) (setting out narrowly tailored exceptions to general prohibition against backsliding).)

Accordingly, the Regional Board must at the least reinstate the temperature effluent limitation if not actually adopt an effluent limitation that precludes any further degradation and perhaps even helps restore water quality in the Pit.

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[1] The Basin Plan's receiving water limitation for temperature–that the discharge shall not cause a rise in the receiving water's temperature of more than 5 degrees–cannot cure the inconsistency between the Tentative Order and the state's antidegradation policy given that the Pit is already impaired such that any increase in temperature must be prohibited.

[2] If consistency among permits is a concern for the Board, it should be placing temperature limitations on the other two discharges of geothermal effluent to the Pit, not removing the limitation in this permit.

B. The Tentative Order Improperly Relaxes a Preexisting Effluent Limitation on Arsenic

The Tentative Order relaxes a preexisting effluent limit on arsenic. The basis for doing so is that the prior limit was improperly calculated. (Tentative Order, p. F-26 ("The methodology to calculate the maximum daily effluent [sic] for arsenic was incorrect in the previous permit and is corrected in this permit.").) While correcting mistakes is an allowable excuse for relaxing effluent limitations,[3] such relaxation must still be consistent with the state's antidegradation policy.

Here, though, the Fact Sheet only provides an entirely conclusory statement, without any supporting evidence, that "[t]his change in the arsenic effluent limits for this permit is consistent with the antidegradation provisions of 40 CFR 131.12 and the State Water Resources Control Board Resolution 68-16." (Tentative Order, p. F-26.) The fact remains that even though the concentration of arsenic in the effluent "has remained relatively stable over the life of the project and within the old and new effluent limits,"[4] the limit–both old and new, and even with 22.5:1 dilution–far exceeds the baseline water quality in the Pit River, which was reported as 3.74 µg/L in Order No. R5-2002-0079.[5] (Order No. R5-2002-0079, p. 3.) Yet all the prior order said with regard to this clear degradation was that the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and SWRCB Resolution 68-16" because (1) compliance with the order would result in the best practicable treatment or control and (2) the impact on water quality will be insignificant. (Order No. R5-2002-0079, p. 7.) Those findings, however, cannot alone establish consistency with the state's antidegradation policy given that that policy also requires that the Board find that the degradation is necessary to accommodate important social and economic development, *regardless of whether water quality is lowered "significantly."* (*EPA Guidance*, p. 7 ("In any case, whether or not water quality is significantly lowered (thus leading to an economic analysis), the State must find that any action which would lower water quality is necessary to accommodate important economic and social development.").) No such findings were made in issuing Order No. R5-2002-0079. It is improper, therefore, for the Regional Board to rely on that prior order in its present analysis. Yet that is what the Tentative Order essentially does because there is no further explanation of how the relaxed arsenic limit–let alone any limit greater than baseline water quality, including the improperly calculated limit–is consistent with the state's antidegradation policy. Accordingly, the Board must provide a proper basis for concluding that the relaxation of the effluent limit for arsenic is consistent with the state's antidegradation policy before it can issue the Tentative order.[6]

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[3] *See* 33. U.S.C. § 1342(o)(2)(B)(ii).

[4] Tentative Order, p. F-26.

[5] It is not clear, though, that even this reported concentration reflects actual baseline water quality for the purposes of conducting an antidegradation analysis given that that quality may be affected by a permitted upstream discharge of geothermal effluent.

[6] As discussed further below, the lack of any effective antidegradation analysis with regard to the relaxation of the effluent limit for arsenic cannot be cured by the overall antidegradation analysis in the Tentative Order given that that analysis is fatally flawed and unsupported.

C. The Tentative Order Fails to Make and Properly Support the Necessary Findings to Allow Degradation of the Pit River

The Tentative Order states that even though the discharge will result in degradation of the Pit River, the resulting degradation is consistent with the state's antidegradation policy. (Tentative Order, p. F-27.) The analysis supporting that statement, though, is entirely overbroad and reeks of boilerplate language. Again, absent from the discussion is any analysis to support the required finding that such degradation is necessary to accommodate important economic and social development. (40 C.F.R. § 131.12(a)(2).) In this connection, alternatives to the discharge as well as alternative methods of treatment must be analyzed and implemented if feasible.[7] (63 Fed.Reg. 36742, 36784 (July 7, 1998) (Regional Board must "ensure[] that all feasible alternatives to allowing the degradation have been adequately evaluated, and that the least degrading reasonable alternative is implemented."); *see also* Water Code § 13000 ("the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation").) So, what additional treatment options have become available since 2002 when the discharger's first permit was issued and which of these treatment options–even prior existing options–can be readily implemented?

The Tentative Order is silent on these issues, meekly acquiescing in the status quo, requiring nothing more than has already been done regarding arsenic, boron, mercury, and the other pollutants in the discharge, such as salinity.[8] The fact is that the state's antidegradation policy requires the Regional Board to do more than just accept the status quo, particularly with regard to discharges of bioaccumulative pollutants that are known to be toxic to the fish and wildlife found along the Pit River, such as the endangered Modoc Sucker. Cost savings in avoiding treatment are simply not enough to disqualify more stringent measures unless those cost savings are *necessary* to accommodate important social or economic development. (*In re Rimon C. Fay*, WQO 86-17, p. 22, fn. 9 ("Cost savings alone, absent any demonstration as to how these costs savings are necessary to accommodate important social and economic development, are not a sufficient basis for determining consistency with the federal antidegradation policy.").) As the Basin Plan says, "[i]n nearly all cases, preventing pollution before it happens is much more cost-

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[7] Indeed, given that this is a NPDES permit, the Regional Board can do a lot more given that Section 13360 does not apply. (*See City of Rancho Cucamonga v. Regional Water Quality Control Board—Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389.)

[8] The Tentative Order seems to excuse the discharger from carrying the burden associated with discharging pollutant-laden water because "[t]he Discharger has no control over the total dissolved minerals or electrical conductivity of the produced geothermal fluid." (Tentative Order, p. F-18.) That may be true, but that does not excuse the discharger from its obligation to comply with the Clean Water Act's goal of eliminating polluting discharges or Porter-Cologne's goal of protecting the quality of waters in the state from degradation. After all, using that logic, the discharger should be allowed to discharge all of the mercury that is inherent in the produced effluent. Wisely, the Regional Board has seen fit to control that pollutant. So why not the other pollutants? Where the degradation would not otherwise occur but for the discharger, no matter how inconsequential, the discharger must be held accountable to at least investigate means to reduce the degradation, including ceasing the discharge within a timely fashion.

effective than cleaning up pollution after it has occurred." (Sacramento and San Joaquin River Basin Plan, pp. IV-15.01 to 16.00.) The *prevention* of degradation, not its accommodation, "is an important strategy to meet the [antidegradation] policy's objectives." (*Id*. at p. 16.00.)

Accordingly, the Regional Board must revise the permit to include more stringent effluent limitations than it presently does in order to ensure the permit's consistency with the state's antidegradation policy. Furthermore, the Board must limit the duration of this permit in order to provide the necessary incentives to the discharger to develop the readily available alternative disposal method of returning the geothermal effluent back to its source via an injection well.

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Thank you for your time in considering these comments. If you have any questions, please do not hesitate to contact me. I look forward to working with you and the Regional Board to address these concerns.

Sincerely,

Dan Gildor